

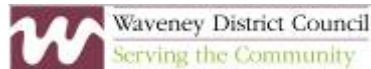
Offshore Wind

The Germany / UK Connection



5th October 2006 – Astral Centre, Lowestoft College

Sponsored by:



www.offshore-power.net

Championing Offshore Renewable Energy

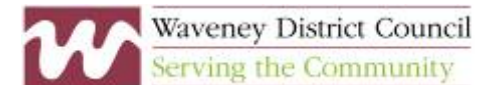
Steve Clarke
Offshore Development Director

Renewables EAST

*Renewables
East
Championing
Offshore
Renewables
Around the
East Coast*



POWER – German Delegation
Thursday 5th Oct, Astral Centre, Lowestoft



Overview of Presentation

- Introductions
- O/S Renewables Market (*EoE*)
- Championing Offshore Renewables
 - Profile raising
 - Supporting collaboration
 - Business development
- Other regional initiatives
- Summary



Introduction

Renewables **EAST**



- Private Company – not for profit
- Established Oct 2003
- Grant funded by EEDA
- Three main company objectives:
 - Reduce climate change (regional)
 - Capture regional economic benefit
 - Establish skills and awareness
- Three core activities:
 - Offshore Renewable Energy
 - Grown Fuels (Biomass & Biofuels)
 - Mass Market Renewables



Offshore Wind Market - EoE Opportunity

Project Name	MW	Turbine Size (MW)	Water Depth (m)		
Scriby Sands	60	2	2-10		
Kentish Flats	90	3	5		
Inner Dowsing	90-108	3-3.6	10		
Lynn	90-108	3-3.6	10		
Gunfleet Sands	108	3.6	8		
Cromer	90-108	3-3.6	23		
Gunfleet Sands phase II	64	4	8		
Humbly Grove	300	3-5	12-14		
Lincs (Inner Dowsing II)	250	3.6-5	13		
London Array - (LAWL) 1	300	3-5	8-12		
Sheringham Shoal	315	3-5	15		
Greater Gabbard	500	3.6-5	15		
Dudgeon East	300	Ca. 2,000 WTG's & 2,000km Cable			
London Array - Shell	333				
Thanet	300				
Westminster Hough	240				
Deeving Shoal	500				
London Array - (LAWL) 2	367				
Flace Bank	500				
Triton Knoll	1,200				
				6GW	



EoE Offshore Wind Market

- Ca. 6GW around EoE coastline
- USA absorbing spare capacity (*PTC*)
- Boom-economies absorbing materials
- Existing (overseas) suppliers reluctant to ramp-up

• UK offshore projects ***‘moving to the right’***

- But, in five years time, the next few projects built

will appear good value by comparison...



Offshore Marine Renewables

- Circa. 10 Tidal devices in developments
- Circa. 20 Wave devices in developments
- MEC II (feasibility) under consideration
- Dti MRDF (£50M) for 'investor readiness'
- Recent 'Path To Power' Report (npower & CCC)
- EoE = not ideal in terms of wave & tidal resource...

... potentially ideal as an 'R&D Zone'

*UK
Currently
Leading on
Technology
for Wave
and Tidal
Energy*



Championing O/S Renewables

1. Raising the profile of offshore renewable energy, regionally, nationally and internationally.
2. Supporting greater co-ordination and collaboration amongst businesses, academic and research institutions, business support organisations and trade associations.
3. Supporting business creation & growth within offshore Renewable Energy in the EoE.



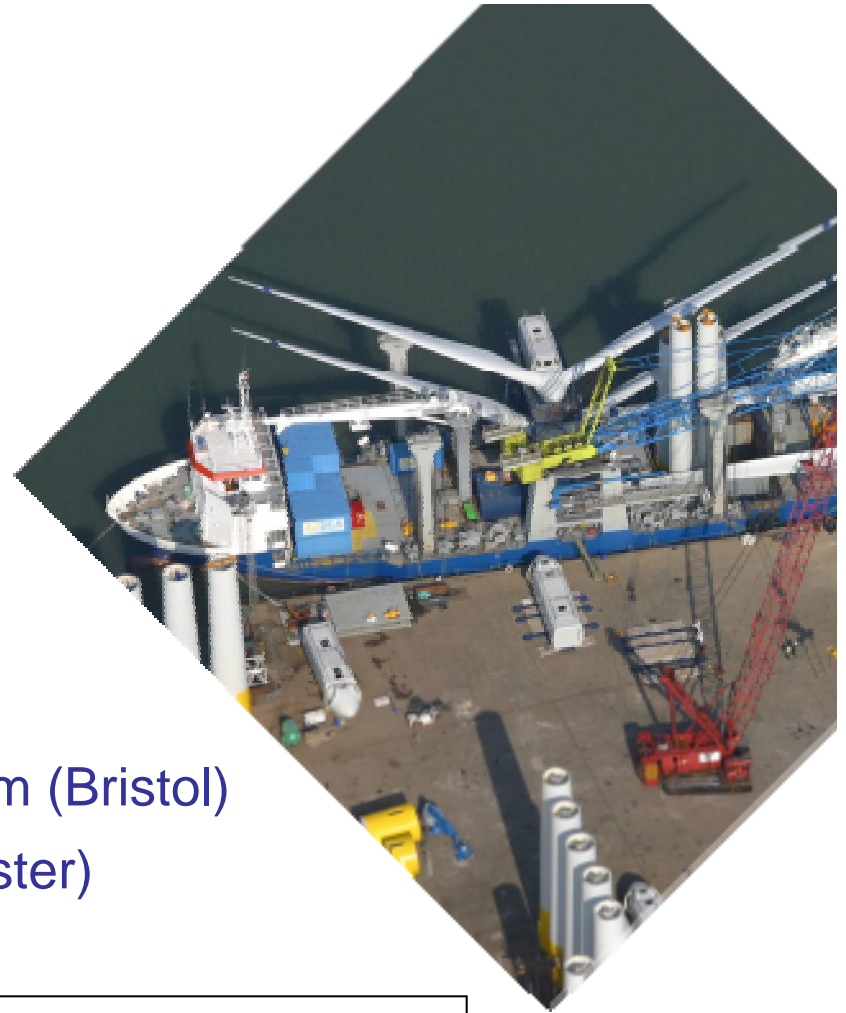
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Profile Raising - Events

- BWEA UK Offshore 2006 (London)
 - BWEA Marine Bill Seminar (London)
 - 2006 WindEnergy Fair (Hamburg)
 - All-Energy 2006 (Aberdeen)
 - BWEA & Dti R&D Forum (London)
 - Eeegr Summer Conference (EoE)
 - Wave & Tidal Technology Symposium (Bristol)
 - Vestas Supply chain Event (Manchester)
 - Airtricity / Flour Event (Ipswich)
-
- POWER Project German Inward Mission (EoE)
 - European Regions Event & Investor Café (Brussels)
 - BWEA28 Annual Conference (Glasgow)



Championing O/S Renewables

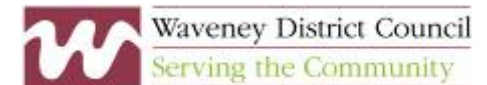
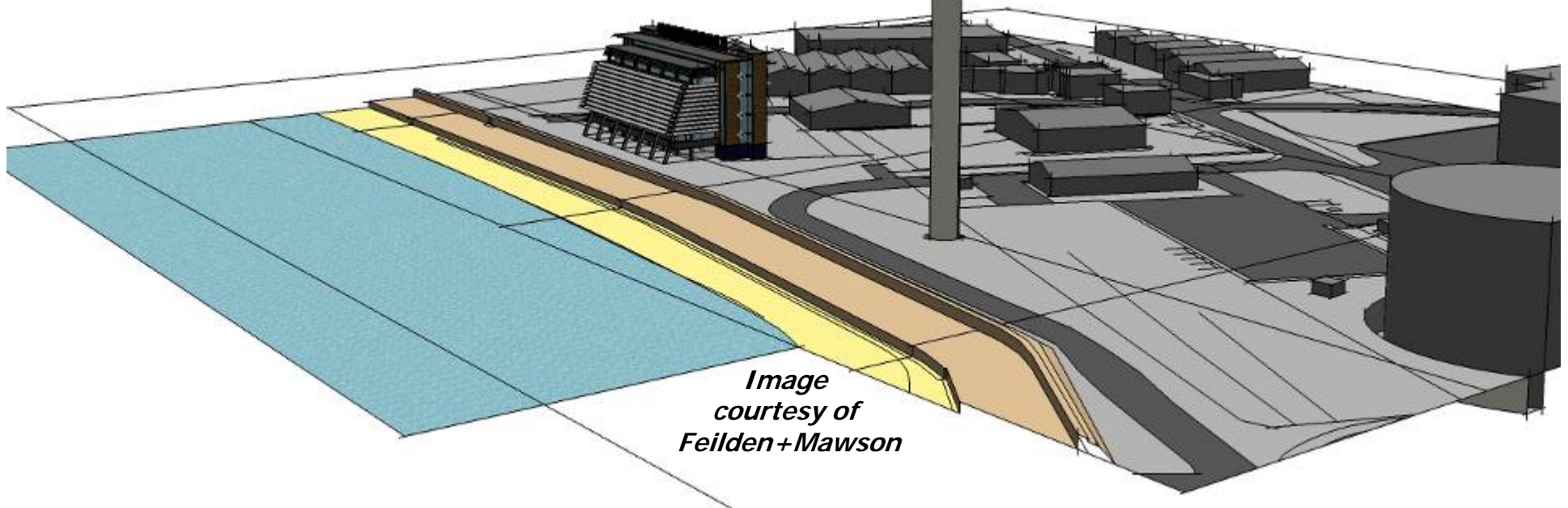
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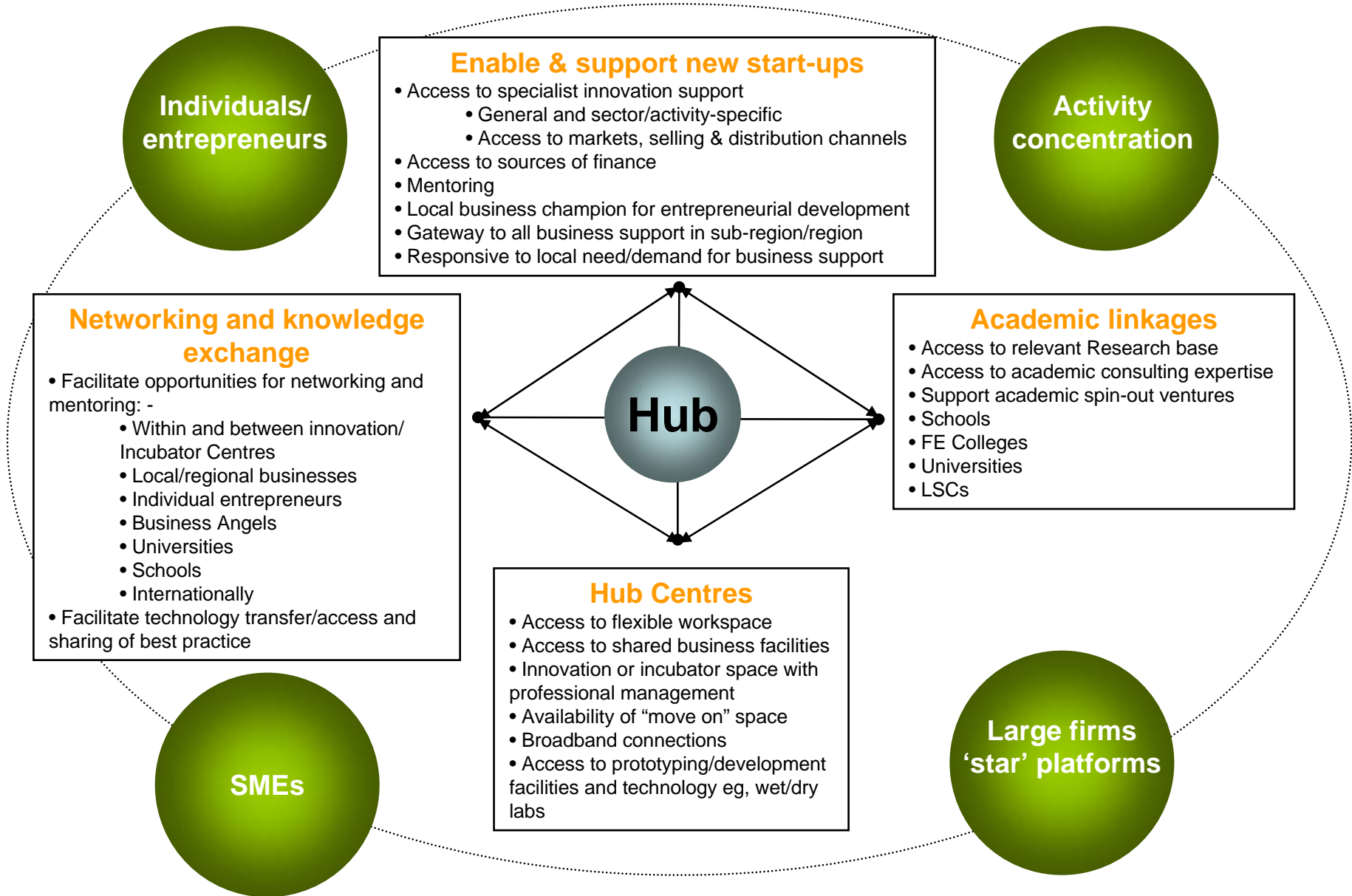


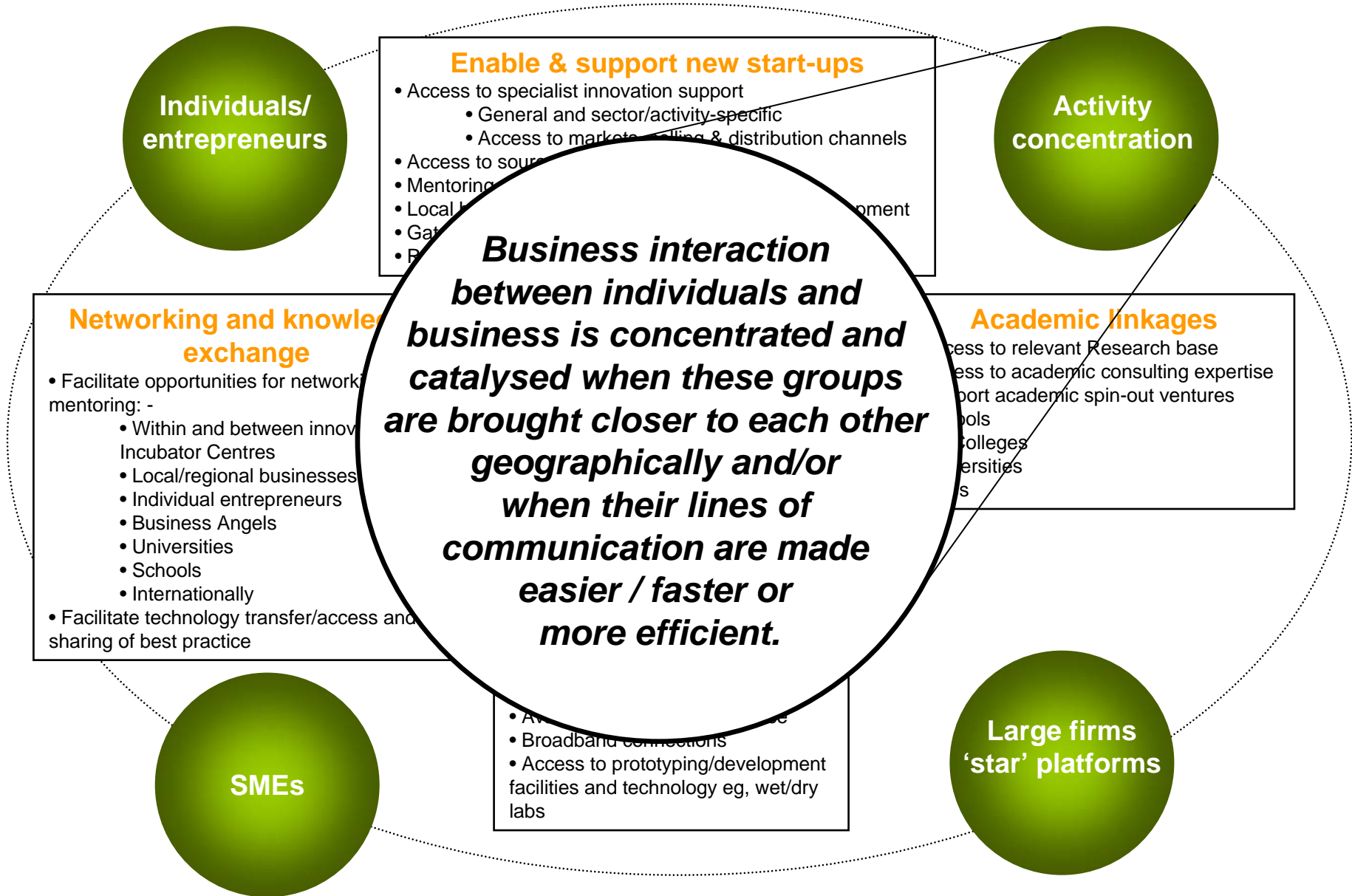


Championing Offshore
Renewables
(Wind, Wave & Tidal)

*The regional
enterprise hub
for Offshore
Renewables in
the E.o.E*







OrbisEnergy

offshore renewable business

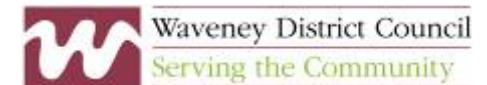
A 'Landmark Building'
as an icon for regeneration.

*The regional
enterprise
hub for
Offshore
Renewables
in the E.o.E*



**Exhibition
and
Conferencing
Facilities.**

Flexible, open plan office accommodation over 3 storeys



Features of OrbisEnergy

- Physical focus for O/S Renewables
- Eastern-facing aspect (view of wind farms)
- Striving for BREEAM 'Excellence'
- Wood-chip Biomass boiler
- Concrete frame (large thermal load)
- Raised on stilts (car parking & security)
- Access for less-able bodied employees



Benefits of OrbisEnergy Tenancy

- Easy in/out tenancy terms (SME friendly)
- State of the art facilities throughout
- Access to market information (quickly)
- Range of business support services
- Creative thinking (*drinking*) space
- Part of a wider reaching enterprise hub
- Early tenants benefits from prime locations

*Sector
focus at a
regional
level*



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Dti Supply Chain - PILOT Scheme

“...increase the competitiveness of suppliers to the Renewables sector in order that they are able to secure a greater percentage of UK content...”

- **E-Tech** *Marine Electrical Systems/Solutions*
- **GMSL** *Standardised Sub-sea Power Cable Joint*
- **JDR** *Wind Farm Array Cable Products (Beatrice)*
- **ODE** *Cable Depth Monitoring System (Scroby)*
- **PSL** *Offshore Controlled Bolt Tightening.*



Contributing Dti / SE Guide to Regional Suppliers



E-Tech Group Ltd

Excellence:

Marine and offshore electrical services

Key products:

Full electrical project turnkey management from Design, through installation, testing and commissioning to the supply of switchgear suitable for offshore applications, cables and electrical equipment.

The provision of ongoing maintenance during the service life of offshore fields, supported with condition monitoring services including current injection and thermal imaging.

Facilities location:

Gt.Yarmouth UK (HQ) with locations throughout the UK, France, and the Middle East providing skilled engineers at all levels.

Global presence:

Operational presence worldwide handling multi million pound projects.

Turnover:

In excess of £12m



Global Marine Systems Limited

Excellence:

Subsea cable installation & burial

Key products:

Installation & burial of export and inter-array cables.

Wind industry customers:

Vestas, Blyth Offshore Wind Ltd, Nexans Power Cables

Facilities location:

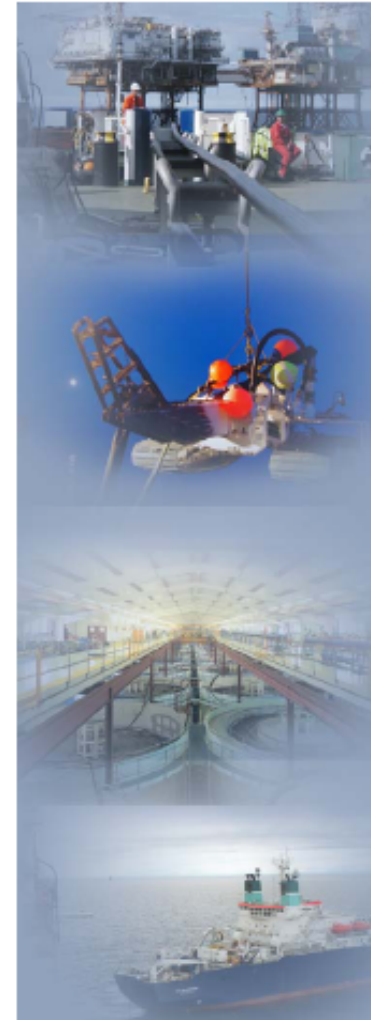
Chelmsford Essex (HO), Portland Dorset (Subsea Base)

Global presence:

Offices in UK, USA, Asia. Operate on a worldwide basis

Turnover: €73m (5% in wind)

1st involvement in wind: 2000



JDR Umbilical Systems

Excellence:

Design & manufacture of subsea power cables

Key products:

Inter turbine array cables, termination systems

Wind industry customers:

Talisman Energy (UK) Ltd with Scottish & Southern Energy
Co-venturers

Manufacturing locations:

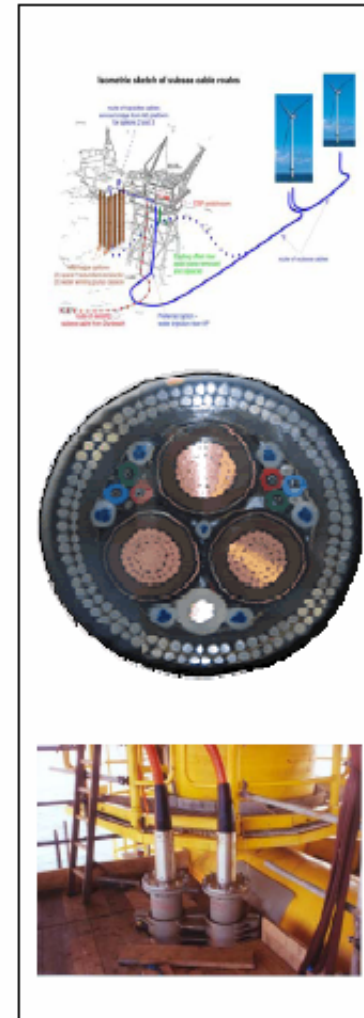
Cambridge UK, Thailand

Global presence:

Operational presence worldwide

Turnover: €36m (1% in wind)

1st involvement in wind: 2005



ODE

Excellence:

Full range of engineering & PM services

Key products:

PM Services, Consulting, Engineering Design, Operations Support, Decommissioning.

Wind industry customers:

Vestas, Centrica, Airtricity, Eclipse Energy, DONG, E.ON, EDF, npower, Clipper Windpower

Facilities location:

Great Yarmouth, Norfolk & London

Global presence:

UK based but with worldwide experience

Turnover: €22m (15% in wind)

1st involvement in wind: 2002

ode



PSL Energy Services

Excellence:

Fabrication and Condition Monitoring / Maintenance

Key products:

Controlled bolting services

Wind industry customers:

Vestas

Manufacturing locations:

Great Yarmouth, Norfolk

Global presence:

Europe, Asia, Russia, Africa

Turnover: €6.5m (0% in wind)

1st involvement in wind: 2003





SLP Energy

Excellence:

Fully integrated renewable energy company – development, engineering, construction, consultancy and project management – on & offshore

Key products:

Offshore foundation and top-side structures, met masts, sub-stations

Key projects:

Ness Point (2.75MW), Sheringham Shoal (315MW) plus further 450MW under development

Wind industry customers:

Norsk Hydro, Centrica, Shell, Humber Wind, COWL, Triodos

Manufacturing locations:

Lowestoft, Teeside & Blackpool

Global presence:

Bases in UK (Wind), US, Mexico, Middle East, Asia

Turnover: €4-5m, mainly in wind.

Parent company - €120m (2005)

1st involvement in wind: Ness Point 2001



Other Initiatives Underway

- EastPort



*Local,
regional,
national
& inter-
national*





Proposed EastPort Outer-Harbour Development



Other Initiatives Underway

- EastPort



- 1stEast



- CoVE – Offshore Technology



- POWER



*Local,
regional,
national
& inter-
national*



Summary

- Significant regional opportunity O/S Wind
- E.o.E is playing to its strengths:
 - Proximity to resource
 - Transferable Skills (O&G)
 - Supportive RDA
- Wave & Tidal opportunities to follow
- Host of initiatives already underway





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*Renewables
East
Catalysing
Offshore
Renewables
Around the
East Coast*

Steve Clarke

Development Director
Offshore Renewable Energy

